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North American Digital Government Working Group: Initial Steps in the Development of a Comparative and Transnational Agenda

Luis F. Luna-Reyes, José Ramón Gil-García,
Theresa A. Pardo, Lei Zheng, Jing Zhang*

Introduction

Governments around the world are moving toward a more global perspective in their efforts to address complex social, political, and economic issues. New modes of government, emerging from this global perspective, and enabled by information and communication technologies, cooperation and collaboration must be explored. In the research community, there is also the need for new models and strategies for working together across geographic and political boundaries.

In an effort to build this more global perspective, the National Science Foundation is providing partial funding for several working groups through the “Building a Sustainable International Digital Government Research Community” program (see www.ctg.albany.edu/projects/dgi). A call for proposals was issued with each proposal required to include more than one country outside of the United States as well as junior faculty and doctoral students from all involved countries. The North American Digital Government Working Group (NADGWG) is one of the three groups selected from thirteen proposals submitted.

* Luis F. Luna-Reyes, Escuela de Negocios, Universidad de las Americas – Puebla, Cholula, México, J. Ramón Gil-García, Centro de Investigación y Docencia Económicas, México, D.F., Theresa A. Pardo, Center for Technology in Government, University at Albany, SUNY, Albany, NY, USA. Lei Zheng, Center for Technology in Government, University at Albany, SUNY, Albany, NY, USA, Jing Zhang, Clark University, Worcester, MA, USA.

This paper describes the goals and the year one progress of the North American Digital Government Working Group on Comparative and Transnational Digital Government. During the first year of activities the group members shared their expertise and interests in three face-to-face meetings in the U.S. and Mexico. During this first year the working group members launched two topical research sub-groups, created work plans for carrying out joint exploration of research questions and developed strategies for group formation, communication and sustainability. Several joint conference papers and presentations were produced during this time as well including several at the dg.o 2008 conference, with three posters, a panel session, as well as participation in a panel on the three international working groups organized by the PIs of the DGI project. The working group will present another poster at the International Conference of the System Dynamics Society at Athens Greece, and a paper at the Minnowbrook III Conference at Lake Placid, NY, USA.

Goals and activities

NADGWG was formed in early 2007 by researchers and practitioners from a variety of institutions and disciplines in Canada, Mexico, and the United States (See Acknowledgements section for participant institutions). Group members are working together to develop a comparative and transnational research agenda targeted at questions about intergovernmental digital government initiatives in North America.

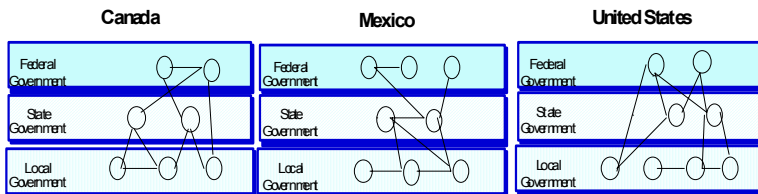
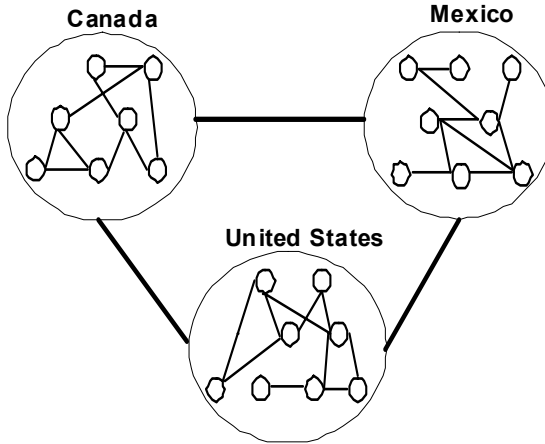


Figure 1. Comparative Research Model

Members of this group are exploring current models of collaboration and cooperation being employed across geographic, jurisdictional and political boundaries, and presidential and parliamentary systems, in both advanced and developing economies. In particular, the group is focused on building understanding of the social and technical capabilities necessary to tackle these important public policy problems both within countries and when those countries work together on these problems.

The comparative analysis of digital government initiatives in each of the three countries is being guided by several analytical frames. (See Figure 1). New knowledge from this comparative view can then inform transnational digital government initiatives (See Figure 2).

Figure 2. Research on Transnational Interorganizational Projects



The topical sub-groups were formed during the kickoff meeting held in Philadelphia, Pennsylvania in May of 2007, immediately following the dg.o 2007 Conference. These two groups are continuing to meet using online collaborative tools and teleconferences. The Border States Integration subgroup is examining the issues and challenges facing government organizations in the border regions of North America in terms of information sharing and interoperability. The Full Information Product Pricing (FIPP) subgroup is investigating the roles of government policy, trust and information and communication technologies in the promotion of emerging distribution networks of goods such as organic and fair trade as well as its impact in promoting economic development in the NAFTA trading region. The specific objectives and research plans of each subgroup are described with more detail in the following sections.

The second face-to-face meet of the Working Group was held at the Universidad de las Americas in Cholula, Puebla, Mexico in November of 2007. Group members worked to clarify research directions, organize and assess current progress of projects and discuss research plans and goals. The meeting also consisted of a joint session with executives from the Mexican Government (Digital Government Unit and IT Policy, e-Mexico program, Informatics Committee for State and Local Governments, and the Digital Economy area from the Ministry of Economy) to explore common interests and possible collaboration. Strategies for building relationships and

achieving a long-term collaboration with government executives were also discussed. Group members discussed the two sub-group topics with government officials to get their feedback on focus and utility of these efforts to practitioners. Updates on the utilization of the online collaboration tool and a presentation of the website prototype were also part of the activities.

The Working Group held its third meeting in Montreal, Quebec, Canada, on Sunday May 18th, 2008. The meeting was organized around an abbreviated agenda including a discussion of the general lessons learned and challenges facing subgroup efforts, a proposal for an edited book, the research agenda setting activities, and the planning for the fourth working group meeting to be held this November in Quebec City, Canada. The group shared observations about the challenges each sub-group is facing including securing funding from multiple countries, translation of research protocols and grant applications, and other related documents and the human subjects process. Working group members are finding different perspectives around issues related to human subjects protection. The role of institutional review boards vis a vis international comparative work was discussed and generally agreed to be problematic. A team was formed to focus on the research agenda setting activities. The members leading the planning for the fourth meeting of the working group shared the status of plans for that meeting and invited feedback on and participation in those efforts.

Sub-group on border states integration and interoperation

This sub-group is working to understand the information sharing and interoperability issues and challenges faced by workers in the border regions of Canada, Mexico, and the United States. The sub-group is particularly interested in studying the role of information and information technologies in these cross-boundary efforts.

With the advance of globalization, transnational issues around border areas become increasingly significant. Topics like national security, public health, cross-border workers, environmental protection, as well as natural disaster response are all related to borders. Solving those problems involve cross-border information sharing and interoperation.

Research agenda and design

The initial product of the sub-group effort will be a description of the current information sharing environment found in three initial case studies from the US-Mexican and US-Canadian borders. The case studies and the theoretical questions which emerge from the preliminary analysis will be used to frame the creation of joint grant proposals. The Border State Sub-group first agreed to conduct a literature review to identify previous relevant research and theoretical foundations. By June 2008, a grant proposal entitled Collaboration, Information Sharing, and Interoperability at the North American Borders has been submitted to Programa Interinstitucional de Estudios sobre la Región de América del Norte (Interinstitutional Program for North American Regional Studies).

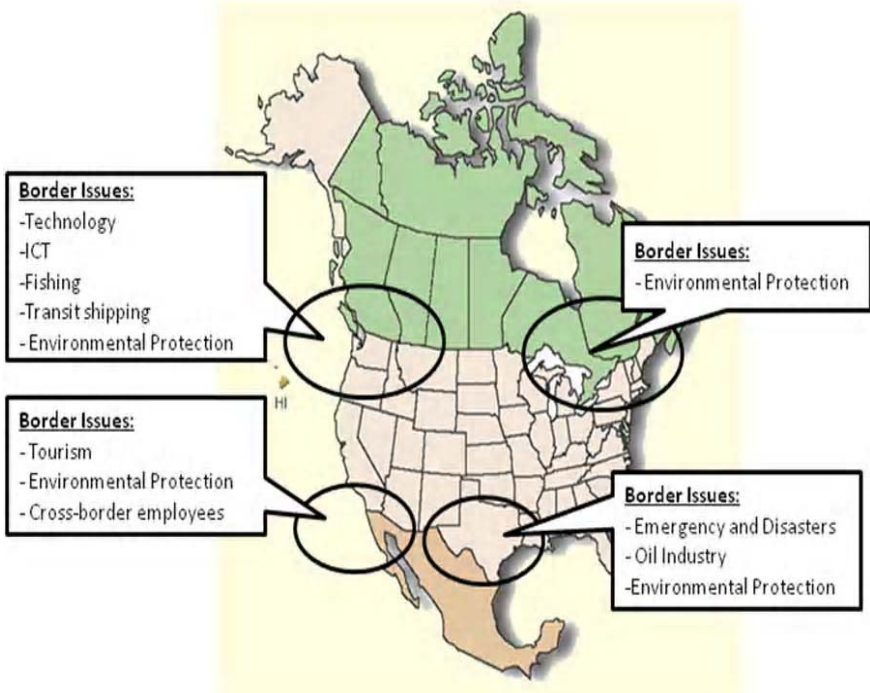


Figure 3. Mapping Border Issues

Understanding border theories

This literature review sought to identify research papers related to the use of information and communication technologies (ICT) for information sharing and interoperability in border regions. In the light of the project, works are classified into two categories: 1) Studies addressing the technological aspects of transnational information

sharing and collaboration; 2) Studies about cross-border intergovernmental relations/agreements that address issues related to information sharing.

Brunet-Jailly's study¹ is particularly relevant to our research in defining our research questions. This paper proposes a theory of borders based on the analysis of literature on borders, boundaries, frontiers, and borderland regions. The theory can be used to compare and categorize borders. It includes four dimensions: 1) Market forces and trade flows; 2) Policy activities of multiple levels of governments on adjacent borders; 3) the particular political clout of borderland communities; 4) the specific culture of borderland communities. Brunet-Jailly suggests that the relative explanatory power of each analytical dimension varies and that these dimensions are correlated, that is, the specific and complex interaction of the four analytical lenses forms the backbone of a theory that allows us to work empirically and to analyze borders at two levels. The core of the theory of border studies is: the implicit recognition that agency and structure are mutually influential and interrelated in the shaping of emerging and integrated borderlands.

At question is the utility of the level of generalization found in this theory to informing government, for example, understanding the dynamics of information use and sharing in border regions. Moreover these four dimensions fail to explicitly describe and explain the role of information in interoperable border systems. Therefore, the sub-group proposes enriching and refining those four dimensions.

Sub-group on full information product pricing networks

The main purpose of this project is to understand the characteristics of distribution networks that attach non-price information to products as a differentiation mechanism. Often this non-price information is transmitted through trusting networks or certifiable labels such as "Organic" or "Fair Trade." We call such networks of relationships among consumers, producers, and distributors Full Information Product Pricing (FIPP) Networks. This study intend to explore how government policies and investment in information and communication technology can be used to promote FIPP networks.

¹ See E. Brunet-Jailly, "Theorizing Borders: An Interdisciplinary Perspective," *Geopolitics* 10, no. 4 (2005).

Background

Most products consumed within the NAFTA trading zone are produced and distributed through cost-effective distribution networks that typically do not reveal certain types of information to end consumers. However, a growing number of consumers and producers are increasingly paying attention to information about where, when, how, and by who our goods are produced. In all these cases, producers strive to attach non-price information, thereby adding value, to their products. FIPP production and distribution networks are important because they can sustain networks of small producers, enable SME creation in rural or under-developed areas, and in general fuel region-wide economic development.² Typically FIPP production and distribution occurs with fewer negative externalities such as adverse environmental impact. FIPP production and distribution also fosters the creation of social capital. Most importantly, because FIPP practices can fuel economic development, they can increase the cash value of exports from producer to consumer nations (or market segments within a nation).³ However, FIPP benefits to producers vary on particular contexts.⁴ Moreover, some analysts pose important questions about the real benefits or the long-term sustainability of FIPP networks.⁵

Research questions and plan

The research questions include:

- Q1. What are the characteristics of successful FIPP networks?
- Q2. How to use information and communication technology (ICT) to support FIPP distribution networks?
- Q3. How can government policy and investment in ICT promote FIPP distribution networks?
- Q4. Which are key factors determining levels of success in FIPP Networks?

² See Christopher Bacon, "Confronting the Coffee Crisis: Can Fair Trade, Organic, and Specialty Coffees Reduce Small-Scale Farmer Vulnerability in Northern Nicaragua?," *World Development* 33, no. 3 (2005).

³ See Hope Bastian, "Keeping Fair Trade Fair in Mexico," *NACLA Report on the Americas* 39, no. 6 (2006).

⁴ See Gautier Piroette, Geoffrey Pleyers, and Marc Poncelet, "Fair-Trade Coffee in Nicaragua and Tanzania: A Comparison," *Development in Practice* 16, no. 5 (2006).

⁵ See Tim Wilson, "Macchiato Myths: The Dubious Benefits of Fair Trade Coffee," *Institute of Public Affairs Review* 58, no. 2 (2006), Bastian, "Keeping Fair Trade Fair in Mexico."

To answer these questions, the subgroup members plan to conduct 5 exploratory case studies in various countries. In-case and cross-case analysis and modeling will be carried out and the results will be presented in conferences and academic journals. In addition, practical guidance will also be developed based on initial case exploration and literature review. After the initial stage, the group plan to develop grant proposals in the three countries to engage in further modeling and testing FIPP networking models, and to promote knowledge and technology transfer among the three countries. As of today, the subgroup has developed a research proposal with translations into English, French and Spanish. Spanish and French versions are under the assessment of government agencies in Quebec and Mexico.

Brief Case description

In this section, we present preliminary results from five cases

Tosepan Titataniske (“Together we win”-English Translation)

Tosepan Titataniske is a cooperative of about 1400 small producers from 70 communities in the northern mountains of the State of Puebla in Mexico that produces and exports organic and fair-trade coffee to the US, Japan and Europe. Tosepan is certified as an organic/fair-trade coffee producer by Fair Trade Mexico, Certimex, Ocia International and by the Fair Trade Labeling Organization (FLO). The certifying process involves certification of small land owners and establishing production quotas for each of them. Tosepan has a manual traceability system to control individual quotas. ICT have the potential to facilitate certification and traceability of coffee in the network of producers. Moreover, according to Tosepan’s marketing director, Fair-trade exports could benefit by having clearer government standards and regulations, which are much developed for organic products.

Traceability, e-business and Québec’s food exports

More and more, American consumers want to know where the food they buy come from and how and by whom it is made. Some players along the value chain are willing to pay more for products made in a certain way or by a certain type of producer. Also, more information is needed by businesses outside the US to export their goods to the US. This fact presents a major challenge to Québécois food producers

who need access to the US market to prosper. Québec has built a powerful traceability system to enable quick identification of problems and prevent the propagation of diseases. But this system only covers certain types of animals (beef, veal and cervid). It cannot track them outside farms and the borders of Québec, and it does not cover other types of food products (e.g. lettuce). Moreover, the system is not popular, because producers don't see how much value (if any) it adds to their products. Studying the impacts of Québec's traceability system and how that system could be extended for export and value-adding purposes would bring real benefits to Québécois producers.

Central American Fair Trade Craft Cooperative

The hub of this FIPP network is a women-owned cooperative in Central America producing non-traditional crafts using traditional fabrics for export to Fair Trade outlets in North America and Europe. Each product is hand-signed by the woman who produced it. The women of the cooperative use the proceeds from the sales to pay themselves a living wage and then to provide social services for their children and community including schools, medical clinic, and new business development opportunities. While this organization does use the Internet to manage its order flow and it does have an on-line URL, it does not yet have a well-developed strategy to use ICT to connect to its customer base. The cooperative is a member of Fair Trade Federation (FTF), SERV, and the Association of Producers for 10,000 Villages. It is skeptical about the future possible role of government intervention to support their business out of a belief that governments help larger organizations, not small producers.

Internet-Enabled Sales of Traceable Foods from Specialty "Heritage" Producers

This case centers of an Internet-enabled network of specialty food producers who market heritage foods directly to consumers. A key feature of their sales approach is an information system that allows consumers to trace and document the source of their food products. Producers in this network sell a wide variety of products (plant and animal) having a "heritage" nature, such as Turkey. The producers are located within the United States and market themselves to a US market. The Internet allows this network of producers to reach out directly to its customers and to provide online food traceability information. There is no government regulation or oversight of this

distribution channel above and beyond usual FDA and Department of Agriculture regulations that apply to all food producers in the United States.

County-Based Networks to Support Local Food Markets in Upstate New York

The NYS Department of Agriculture and Markets is working under a Governor's directive to promote local farmer-to-consumer networks as a way to bolster upstate agriculture. Combining local farm-based energy with a top-down government support, these projects are springing up all around the state of New York and have an ubiquitous, but low presence in the mindset of local consumers. Some local farmers have a more direct approach using direct contracts with consumers in forms of "Community-Supported Agriculture" (CSA). Under these schemes, local consumers actually purchase an annual "share" in the products of a specific farm and in return receive weekly or bi-weekly product shipments during the harvest season. In many regions, farmers sponsor alliances with local restaurants, cooperate in local farmer markets, and work with local food cooperatives. In general, all members of this network are interested in FIPP strategies, increased market share and support prices for local farmers. In general, they do not yet use any sophisticated information systems to support their operations.

Conversations about common themes in each case indicated that a better understanding of FIPP networks has the potential of contributing to the design of policies and technologies to support local and regional economic development. Some of these initial themes to explore are related to network configurations, trust, governance mechanisms, traceability systems, and government policy. This subgroup will continue with the comparison of these initial cases through the use of qualitative techniques as well as modeling and simulation.

Initial explorations of FIPP systems in Canada, United States and Latin America suggest that several factors play a role to explain differences in the operation of each network. Some of these contributing factors are trust, social capital, governance mechanisms, work processes and Information Technologies (IT). Among them, trust appears to be a recurrent theme in the initial cases explored by the research team. Akerlof's information asymmetry theory has been identified as an important element to explain FIPP dynamics.

Final remarks

Together, the Working Group members will produce a series of deliverables for academics and practitioners, including reports, papers, cases or methodological notes among others. The products created will include resources for practitioners throughout North America and beyond as they work both within and across boundaries to enhance capability within multi-jurisdictional policy domains. Due to the diversity present in the three North American countries, this Working Group will be able to develop lessons not only for the region, but also for developing and developed countries facing similar policy issues around the world. As such, the value of the research can be extended beyond the North America to other regions of the world facing similar sets of challenges.

In addition to the research value, the working group members are gaining useful insights into the process of creating an international research community; exploring the role of technology to support collaboration among geographically dispersed researchers, developing strategies for creating research proposals that are relevant to funding organizations in multiple countries, and responding to the multiple research traditions and practitioner priorities in identifying priorities.

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⁶ See George A. Akerlof, "The Market For "Lemons": Quality Uncertainty and the Market Mechanism," *The Quarterly Journal of Economics* 84, no. 3 (1970).

The authors are submitting the paper on behalf of all members of the working group: David Andersen, Josune Arcleus, Monique Charbonneau, Anthony Cresswell, Jane E. Fountain, José Ramón Gil-García, Francisco R. Hernández, Herbert Kubicek, Luis F. Luna-Reyes (Co-chair), Irak López-Dávila, Sehl Mellouli, Celene Navarrete, Theresa Pardo (Co-chair), Paul Prevost, Gabriel Puron Cid, Felipe Ramírez, Jeffrey Roy, Rejean Roy, Rodrigo Sandoval-Almazán, Jochen Scholl, Andrew Whitmore, Jing Zhang, and Lei Zheng.

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